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10/613,611	07/03/2003	Ronald G. Hart	6270/109	6801

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EXAMINER

WACHSMAN, HAL D

ART UNIT PAPER NUMBER

2857

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,611

Applicant(s)

HART, RONALD G.

Examiner

Hal D. Wachsman

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McRae (5,859,596) in view of the Applicant's Admissions of the prior art.

As per claim 1, McRae (see at least abstract) discloses the digital network. McRae (Abstract, col. 3 lines 50-57) discloses the first and second devices coupled with the digital network. McRae (col. 3 lines 50-60, col. 5 line 24) discloses the "at least one sensor coupled with said electric circuit...and generate at least one analog signal indicative thereof". McRae (col. 5 lines 24-26) discloses the "at least one analog to digital converter coupled with said at least one sensor...to at least one digital signal representative thereof". McRae (Abstract, col. 5 lines 20-27, col. 11 lines 57-61) discloses "a first processor coupled with said at least one analog to digital converter...from said at least one digital signal". McRae (Abstract, figures 2-4, col. 3 lines 64-67) discloses "a plurality of communications ports, each communication port of said plurality of communication ports operable to send and receive communications

Art Unit: 2857

over said digital network....substantially simultaneously with engaging in a second communication from a second communication port of said plurality of communications ports". McRae (Abstract, col. 3 lines 64-67) discloses a communication port of the first device operable to communicate with at least one of a plurality of communication ports of a second device over the digital network but does not clearly disclose that there is a *plurality* of communication ports in the first device that can communicate with at least one of the plurality of communication ports of the second device over the digital network. However, the Applicant's Admissions of the prior art (page 14, paragraph 0080, lines 1-3, of the substitute specification) teaches a plurality of communication ports such as RS-232, RS-485, Ethernet or other industry standard ports for making a device compatible with a network. Consequently, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the Applicant's Admissions of the prior art to the invention of McRae and have a plurality of communication ports in the first device that can communicate with at least one of the plurality of communication ports of the second device over the digital network as there are a variety of industry standard network protocols and as a network may have a variety of workstations, devices, etc. a plurality of communication ports would facilitate approximately same time communication from the first device to a plurality of other devices.

As per claim 3, McRae (see at least abstract) discloses the feature of this claim.

As per claim 4, McRae (Abstract, col. 3 lines 64-67) discloses the feature of this claim.

As per claim 5, the Applicant's Admissions of the prior art (page 14, paragraphs 0080, 0082 of the substitute specification) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of the Applicant's Admissions of the prior art to the invention of McRae as specified above because Ethernet is one industry standard communications port just as is the RS-232 that is being used in McRae.

As per claim 6, McRae (Abstract, figure 3) discloses the feature of this claim.

As per claim 7, the Applicant's Admissions of the prior art (page 14, paragraphs 0080, 0082, of the substitute specification) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of the Applicant's Admissions of the prior art to the invention of McRae as specified above because RS485 is one industry standard communications port just as is the RS-232 that is being used in McRae and was well known in the art for interfacing multiple devices to a shared bus.

As per claim 8, McRae (Abstract, figure 3) discloses the RS232 port. It appears though that McRae does not clearly disclose the Ethernet port. However, the Applicant's Admissions of the prior art (page 14, paragraphs 0080, 0082 of the specification) teaches this excepted feature. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of the

Art Unit: 2857

Applicant's Admissions of the prior art to the invention of McRae as specified above because Ethernet is one industry standard communications port just as is the RS-232 that is being used in McRae.

As per claim 9, McRae (col. 7 lines 19-67, col. 8 lines 1-6) discloses the features of this claim.

As per claim 10, it is inherent in the art that baud rate is a reference to the speed at which a modem can transmit data and applicable in McRae (column 4 lines 57, 58 for example) which uses a dial-up modem connection as well as the RS-232 links (see at least figure 3 in McRae).

As per claim 11, McRae (Abstract, Figure 3, col. 7 lines 32-39) discloses the feature of this claim.

As per claim 12, McRae (Abstract, figure 3) discloses the features of this claim.

As per claims 13 and 15, it is inherent in the art that RTS is an abbreviation for Request To Send, a signal used in serial communications sent as from a computer to its modem, to request permission to transmit.

As per claim 14, it is inherent in the art that CTS is an abbreviation for Clear To Send, a signal used in serial communications sent as from a modem to its computer, to indicate that transmission can proceed.

As per claim 16, it is inherent in the art that because of any time in waiting for the CTS signal, there would be a delay in transmission from the computer.

Art Unit: 2857

As per claim 17, McRae (col. 7 lines 66, 67, col. 8 line 7) discloses the feature of this claim.

As per claim 18, McRae (see at least abstract) discloses the feature of this claim.

As per claims 19 and 20, McRae (Abstract, figures 3, 4) discloses the features of each of these claims.

As per claim 21, McRae (figure 3, col. 3 lines 50-60, col. 5 lines, 2, 3, 24) discloses the sensing step. McRae (col. 5 lines 24-26) discloses the converting step. McRae (Abstract, col. 5 lines 20-27, col. 11 lines 57-61) discloses the generating step. McRae (Abstract, figures 2-4, col. 3 lines 64-67) discloses the receiving step. McRae (Abstract, figures 2-4, col. 3 lines 64-67, col. 5 lines 1-12) discloses the engaging step with the exception that while McRae does disclose a communication port of a first device operable to communicate with at least one of a plurality of communication ports of the second device over the digital network, McRae does not clearly disclose that the *plurality* of communication ports (i.e both communication ports) that are in the first device can communicate with at least one of the communication ports of the second device over the digital network. However, the Applicant's Admissions of the prior art (page 14, paragraph 0080, lines 1-3, of the substitute specification) teaches a plurality of communication ports such as RS-232, RS-485, Ethernet or other industry standard ports for making a device compatible with a network. Consequently, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the Applicant's Admissions of the prior art to the invention of McRae and have a

Art Unit: 2857

plurality of communication ports in the first device that can communicate with at least one of the communication ports of the second device over the digital network as there are a variety of industry standard network protocols and as a network may have a variety of workstations, devices, etc. a plurality of communication ports would facilitate approximately same time communication from the first device to a plurality of other devices.

As per claim 24, McRae (see at least abstract) discloses the digital network. McRae (Abstract, col. 3 lines 50-57) discloses the first and second devices coupled with the digital network. McRae (col. 3 lines 50-60, col. 5 line 24) discloses the "sensing means for sensing at least one power parameter...generating at least one analog signal indicative thereof". McRae (col. 5 lines 24-26) discloses the "converting means for converting said at least one analog signal ...digital signal representative thereof". McRae (Abstract, col. 5 lines 20-27, col. 11 lines 57-61) discloses the "processing means for generating at least one computed value from said at least one digital signal". McRae (Abstract, figures 2-4, col. 3 lines 64-67, col. 5 lines 1-12) discloses the "communicating means for receiving communications from said digital network and transmitting said communications to said processing means, wherein each of said first device and said second device further comprises a plurality of communication ports..". With respect though to "...wherein said plurality of communication ports in said first device are operable to communicate with at least one of said plurality of communication ports in said second device" McRae (Abstract, col. 3 lines 64-67) discloses a communication port of the first device operable to communicate with at least one of a

Art Unit: 2857

plurality of communication ports of a second device but does not clearly disclose that there is a *plurality* of communication ports in the first device that can communicate with at least one of the plurality of communication ports of the second device. However, the Applicant's Admissions of the prior art (page 14, paragraph 0080, lines 1-3, of the substitute specification) teaches a plurality of communication ports such as RS-232, RS-485, Ethernet or other industry standard ports for making a device compatible with a network. Consequently, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the Applicant's Admissions of the prior art to the invention of McRae and have a plurality of communication ports in the first device that can communicate with at least one of the plurality of communication ports of the second device as there are a variety of industry standard network protocols and as a network may have a variety of workstations, devices, etc. a plurality of communication ports would facilitate approximately same time communication from the first device to a plurality of other devices.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McRae (5,859,596) in view of the Applicant's Admissions of the prior art as applied to claim 1 above, and further in view of Macrodyne Inc. Model 1690 Phasor Measurement Unit, Product Description.

As per claim 2, Macrodyne Inc. Model 1690 Phasor Measurement Unit, Product Description (System Overview, Analog Input, Clock outputs, figure 2) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the

Art Unit: 2857

art at the time the invention was made to apply the techniques of Macrodyne Inc. Model 1690 Phasor Measurement Unit, Product Description to the invention of McRae and the Applicant's Admissions of the prior art as specified above because as taught by Macrodyne Inc. Model 1690 Phasor Measurement Unit, Product Description (page 2 – System Overview) because the sampling time is precisely known (to better than a microsecond), data from units installed throughout a utility power network can be directly compared therefore instantaneous power can be measured in real-time.

4. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McRae (5,859,596) in view of the Applicant's Admissions of the prior art as applied to claim 21 above, and further in view of Burnett, Jr. et al. (Power System Applications for Phasor Measurement Units).

As per claims 22 and 23, Burnett, Jr. et al. (Power System Applications for Phasor Measurement Units, page 9) teaches that there was increasing interest in synchronized phasor measurement units and how they may be used for various power system applications and that the development of new types of computer-based hardware and the completion of the Global Positioning System of satellites provide the components needed for true synchronized PMU monitoring systems. This page also teaches that synchronized sampling, derived from the GPS, and high accuracy sigma-delta analog-to-digital converters form the basis for a system that can measure the state of the power system at a given instant over any area. Consequently, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Burnett, Jr. et al. to the invention of McRae and send/receive

Art Unit: 2857

time synchronization requests between the devices because as taught by Burnett et al. (page 11) multiple synchronized PMUs capturing the same event can easily provide the necessary time synchronized data to study wide area effects of system damping and oscillations.

5. The following references are cited as being art of additional general interest:

Schurig (5,818,821) which discloses a universal *LAN power line carrier repeater system* in which a **plurality of communication ports in one device can communicate with a plurality of communication ports in a second device using industry standard ports such as RS-232, RS-485, Ethernet, etc.**, Allfather (5,818,245) which discloses an impedance measuring system utilizing a **plurality of communication ports including Ethernet, RS485 and RS232** to communicate with other devices, and Banaska et al. (5,918,194) which disclose a configurable communications interface of an integrated modular measurement system which uses various *communication protocols* such as **RS-232, RS-422, RS-485** and *parallel port* communication.

6. Applicant's arguments filed 6-21-06 have been fully considered but they are not persuasive. First, the arguments with respect to claim 24 are now moot as a result of the new grounds of rejection under 35 U.S.C. 103 which was necessitated by the Applicant's amendment to this claim. With respect though to the paragraph on page 9 of the reply in which the Applicant states "Applicant would like to reserve the argument that McRae is not prior art..." the following is respectfully repeated from previous office actions:

A continuation-in-part application contains new matter that is not in the parent application as is the situation when continuation-in-part application 08/798,723 is compared to the parent application of that case which is U.S. application serial no. 08/369,849 now U.S. patent no. 5,650,936. Thus, the filing date to be considered in this situation is not the 1994 filing date of U.S. patent no. 5,650,936 but rather **the filing date of the continuation-in-part application 08/798,723 which is February 12, 1997**. The *McRae* reference has a filing date of August 30, 1996 which is before the February 12, 1997 filing date of the 08/798,723 CIP application and thus *McRae* does indeed qualify as art under 35 U.S.C. 102(e). In addition, the Examiner respectfully notes that no arguments were presented in the Applicant's reply to clearly show where and why in the 5,650,936 patent there is support for all the features now being claimed in this new continuation application.

With respect to the Applicant's argument on page 9 of the reply concerning the 35 U.S.C. 103 rejections using *McRae* in view of the Applicant's Admissions of the prior art, that "Specifically, there is no disclosure that "each of the plurality of communication ports of said first device are further operable to communicate with at least one of the plurality of communication ports of said second device over said digital network" as in claims 1 and 21..." the Examiner respectfully notes the following:

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, the communication between multiple communication ports from one device to multiple communication ports of another device *was well known in the prior art and evidence of this can be found in the Schurig reference* noted in paragraph 5 above (see for example the Abstract, col. 1 lines 15-23, col. 2 lines 12-17, col. 3 lines 25-37, col. 9 lines 30-40 of the Schurig reference).

With respect to the Applicant's arguments on pages 10-11 of the reply in which the Applicant states "In addition, the Applicant respectfully notes that paragraph 80 of the substitute specification is located in the "DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS" section of the application" paragraph 80 clearly states "...or other **industry standard** communications ports" thus as these ports were industry standard it is readily apparent that this was known in the prior art and the Examiner has provided supporting evidence of this as shown above in paragraph 5 in the Schurig, Allfather and Banaska et al. references.

On page 11 of the reply, the Applicant argues "...Accordingly, it would not be obvious to combine McRae with any reference merely disclosing multiple communication ports because McRae already discloses multiple communication ports, but fails to disclose that those ports are operable to communicate over the network with a second device".

With respect to the above though the Examiner respectfully notes the following from col. 5, lines 2-3, of the McRae patent:

"The power line 12 and RS-232 links 23 and **32** are the communication paths in the **network**".

Communication path 32 is the communication path between monitoring device 18 and the node computer 30 as can be seen in the Abstract figure. As indicated above since 32 is a communication path in the network, then it is clear to see then that there is indeed a second communication port in the monitoring device that can communicate over the network as the *RS-232 link 32 is a communication path in the network* (i.e. there are a plurality of communication ports in the first device that can communicate over the digital network given that path 32 is part of the network). In addition, the Abstract clearly shows that through the power line 12 communication path in the network one monitoring device 18 can communicate with a second monitoring device 18 and thus it is quite clear to see that the ports in McRae are indeed operable to communicate over the network with a second device.

On page 11 of the reply the Applicant states "Neither McRae nor Macrodyne disclose all of the limitations of the independent claim from which claim 2 depends." However, Macrodyne was only applied to teach the feature of claim 2 and no arguments were presented here to show any distinction between the feature of claim 2 and the Macrodyne reference. On page 12 of the reply the Applicant argues that "Neither McRae nor Burnett disclose all of the limitations of the independent claim from which claims 22 or 23 depend." However, Burnett, Jr. et al. was only applied to teach the features of claims 22 and 23 and no arguments were presented here to show any

distinction between the features of claims 22 and 23 and the Burnett, Jr. et al. reference.

7. No claims are allowed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

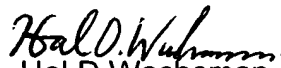
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D. Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2857

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Hal D Wachsman
Primary Examiner
Art Unit 2857

HW
September 9, 2006